NATURAL
RESOURCES
DEFENSE
COUNCIL

1198 SEP 23 1999

September 23, 1999

Rick Breitenbach
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Re: **Comments on the Revised CALFED Draft Programmatic EIS/EIR**

Dear Mr. Breitenbach,

We offer the following comments on behalf of the 400,000 members of the Natural Resources Defense Council (NRDC), more than 87,000 of whom are Californians. NRDC has been actively involved in the CALFED process since its inception and remains committed to it's success. We recognize the progress that CALFED has made in the past year. However, our analysis reveals that the draft document does not meet several of the requirements of the National Environmental Policy Act and the California Environmental Quality Act.

We will submit under separate cover, in cooperation with other groups, an additional analysis of the adequacy of the document. We have also resubmitted our July 1, 1998 comments on the previous draft, many of which have not been addressed. Finally, we incorporate by reference the attached June 30, 1998 comments of the Environmental Water Caucus (EWC), of which NRDC is a steering committee member, and the comments of The Bay Institute of San Francisco, the Environmental Defense Fund, Friends of the River, Clean Water Action, the Nature Conservancy, Mono Lake Committee and Save The Bay, which are commenting on different issues. We believe that the following issues must be addressed in the final CALFED EIS/EIR.

I. OVERVIEW

NRDC strongly supports a cooperative agency and stakeholder approach to developing an ambitious, balanced and cost-effective solution to the ecosystem, water supply reliability, water quality and system vulnerability issues related to the Bay-Delta. Some stakeholders have indicated that they are ready to "live without CALFED." We believe that if CALFED were to fail, it would not be long before we once again began to experience the gridlock that led to the creation of this program.

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We remain committed to assist CALFED in developing an equitable and workable solution.

We believe that many of our concerns regarding the draft PEIS/R stem from basic conflicts within the CALFED program itself. By addressing these issues, CALFED could resolve some of the underlying problems facing the overall program and this document. These issues include:

It's the Economy, CALFED. CALFED has been late in beginning credible programs to incorporate basic economic principles in its Financing Plan, the Economic Evaluation of Water Management Alternatives, the Water Use Efficiency Plan and the Water Transfers Plan. It is not yet clear if CALFED will complete credible efforts in these areas in time to shape the final Preferred Alternative. In the past, water development has been largely driven by politics, with a disregard for true economic cost and benefits. We recommend that CALFED recognize that a healthy economy and environment are underlying goals of CALFED.

Analysis, Not Business as Usual. The surface storage debate has been fraught with the language of traditional battle lines. However, CALFED can sidestep this entrenched debate by engaging in a comprehensive and realistic analysis of storage-related issues. We have attached our March 1999 comments regarding the CALFED Integrated Storage Investigation which outline our suggestions for an adequate analysis of storage-related issues.

Time Value of Water vs. Cumulative Impacts. CALFED has talked extensively about the time value of water. This concept, however, is as old as the first water storage project. To resolve some of the controversy regarding storage, CALFED must address the tension between the time value of water theory and the cumulative impacts of water storage projects throughout the Bay-Delta watershed.

Sharing Benefits. The debate regarding the Environmental Water Account (which is intended to provide additional environmental benefits) and the Water Management Strategy (which is intended to provide benefits for all water users) reflects an attempt by some water users to assure that they obtain all of the benefits of CALFED's water supply program. CALFED can end this impasse through the application of a clear principle – benefits of water management tools should be shared among the uses which are willing and able to pay.

Innovative Ecosystem Restoration Strategies. CALFED's ecosystem restoration program should devote more resources to supporting innovative strategies, such as efforts to restore the San Joaquin River and to reuse Bay dredged material for habitat restoration and levee maintenance purposes in the Delta. These efforts have the potential to provide quantum leaps in ecosystem restoration and to create new

CALFED beneficiaries – which will in turn attract additional funding partners and political support.

Surprises Harm the Process. Stakeholders and member agencies were surprised by the change in direction regarding Delta conveyance in this document. It appeared that the December 18 Phase 2 Report found a reasonable and analytically-supported position regarding Delta conveyance. The change in the current document was made without stakeholder involvement. The new language has led to confusion, suspicions and appears not to be based on sound analysis. CALFED must take care to keep all agencies and stakeholders fully informed regarding key issues.

Broader Interests, Broader Benefits. The CALFED approach is a dramatic improvement over the smoke filled rooms in which California water policy was once determined. However, CALFED must recognize that there are many interests not currently represented on BDAC, such as low income and minority communities, that have legitimate concerns and could be harmed or benefited by the CALFED program.

It's Time for Specificity. Early in the CALFED process, a certain amount of ambiguity regarding the program was unavoidable. Decision-makers had not begun to wrestle with difficult issues and were working to establish a working relationship among stakeholders. However, as CALFED approaches the Record of Decision, the program must begin to address directly fundamental issues of disagreement. The program will be better served by a more focused and specific Preferred Alternative than by one that is broad and ambiguous.

II. PROGRAM PURPOSE

Supply Side Bias: The document states that CALFED's program includes an objective to "improve export water supplies" (1-7). We believe that an explicit commitment to improving export supplies is inappropriate and demonstrates a bias against alternative strategies to achieve reliability that could prove more cost-effective and environmentally friendly, such as water transfers, conservation, reclamation and land fallowing. This objective appears to be political in nature, as it has not been previously identified explicitly. Thus, the document appears to assume, without discussion or support, that other strategies cannot provide adequate improvements in water supply reliability.

Further, the inclusion of storage as an explicit objective, is in conflict with CALFED's ecosystem restoration objective and its no-redirected-impacts solution principle. Finally, this statement of objectives is incompatible with the description of the water supply reliability goals in the Revised Phase II Report that do not include increasing export water supplies as a goal(Phase II Report, p. 26).

We continue to object to the inclusion of storage and Delta conveyance as CALFED program elements (Revised Phase 2 Report, p. 28). This inclusion perpetuates the misconception that the CALFED program must include new storage, particularly new surface storage, and Delta conveyance facilities. We recommend that these issues be addressed comprehensively in the water supply reliability and water quality objectives (EWC Blueprint, p. 5).

Water Supply Reliability Goal: We continue to encourage the program to provide a meaningful water supply reliability definition and goal (see recommendations in the Blueprint for an Environmentally and Economically Sound CALFED Water Supply Reliability Program).

III. WATER USE EFFICIENCY PROGRAM

In our July 1, 1998 comments on the previous draft PEIS/R, NRDC stated that CALFED had not prepared a comprehensive analysis of water management tools that had the potential to provide environmentally and economically sustainable improvements to water supply reliability throughout California. Following those comments, NRDC and other members of the Environmental Water Caucus prepared the Blueprint for an Environmentally and Economically Sustainable CALFED Water Supply Reliability Program. That Blueprint presents a detailed set of recommendations that could improve water supply reliability, while contributing to ecosystem restoration. The current document has not fully analyzed all of these tools, nor does the Preferred Alternative represent such a sustainable water supply reliability program. We recommend that the document be revised to address the recommendations of the EWC Blueprint.

The Water Use Efficiency program has made progress over the past year. However, some of that progress has not yet been translated into the results that are necessary for an adequate level of analysis in this document. We are pleased that revisions in the program have led to an increase in conservation savings of 1.4 MAF (WUE, p. P-14). However, we continue to believe that the draft PEIS/R is inadequate in its treatment of a number of issues addressed in our previous comments, including: volumetric pricing, measurement, land fallowing and retirement, AB 3616, reliance on Bulletin 160, yield benefits of agricultural conservation, and crop shifting. As a result of the inadequacies discussed above and in our previous comments, the WUE Program Plan found that estimates of agricultural conservation potential "did not change notably" (WUE, p, P-14) The PEIS/R continues to significantly underestimate the potential cost-effective savings through a full range of water use efficiency measures.

Economics: The Water Use Efficiency (WUE) program in the draft PEIS/R has failed to incorporate basic economic principles in its definition of efficiency and in the WUE program. For example, although the costs of water use efficiency measures are discussed in this document, the economic benefits are not. The document cannot,

therefore, determine what activities are cost effective for an individual user, regionally or statewide. In addition, the document states that the Program will "assure high efficiency," however, we believe that it is not possible to develop a meaningful definition of "high efficiency" without full incorporation of economic principles. We recognize that CALFED's Economic Evaluation of Water Management Alternatives effort is beginning to apply basic economic principles to the analysis of water management. That effort, however, is largely independent from the WUE Program Plan.

Groundwater and Free Riders. The WUE program has discussed the potential for agricultural water conservation and transfer programs to have impacts on groundwater resources. We believe that CALFED should distinguish between two distinct categories of water users regarding these issues. We agree that water transfers and conservation programs in genuine areas of origin and in areas tributary to the Delta must be examined closely for third party water user and environmental impacts. However, we believe that the situation may be different in regions that are net water importers and in regions that are not tributary to the Delta. For example, in areas that are not tributary to the Delta, return flows usually will not benefit the Bay-Delta ecosystem. In some export areas, return flows are sources of significant contamination. In areas not tributary to the Delta and in net importing regions, the effect of disallowing transfers and conservation measures that reduce groundwater percolation is to mandate inefficiency and impose mandatory groundwater recharge requirements on water users, which would benefit users who have not paid for this water. In these areas, there is a significant free rider issue that CALFED must address. We recommend that CALFED revise the document, with regard to transfer and conservation measures, to distinguish between regions with distinct characteristics, and to determine how conservation and transfer related issues should be addressed in these regions.

Science Panel Recommendations. We recommend that CALFED devote additional resources to the implementation of the recommendations of the science panel regarding the water use efficiency program, particularly regarding the revision of Bulletin 160, as it is used in the CALFED document (see also NRDC's 1998 comments). The document should be revised to reflect these recommendations.

Our concerns regarding the water use efficiency program are also discussed in the economics and financing section, below. The document should be revised to reflect a full consideration of the issues discussed herein, in our July 1999 comments and in the attached EWC Blueprint.

IV. TRANSFERS

CALFED has struggled with the creation of a water transfers program. This issue has been fraught with controversy and stalemate. CALFED has struggled with its proper

role in water transfers. We find that the document has failed to capture two of the major functions and benefits of water transfers.

Reduced Pressure for Additional Diversions from the Environment. The document indicates that water transfers can provide water for increased instream flows. However, it does not indicate that transfers can allow increased benefits to be derived from developed supplies, reducing demand to increase diversions from the Delta and it's tributaries. Such additional degradation would increase the burden on the Ecosystem Restoration Program and decrease its likelihood of success.

Increased Economic Efficiency. The WUE document states that "it is not a CALFED objective to increase the economic efficiency of water (use)" (Water Transfer Program Plan , p. 2). We contend that it should be. If it is not CALFED's underlying goal for transfers to increase water use efficiency, then what is CALFED's goal? This oversight is consistent with CALFED's reluctance to undertake an economic analysis of water management tools and to prepare a credible financing plan. In our attached EWC Blueprint, the environmental community recommends a definition of water supply reliability that could help address the legitimate concerns of stakeholders while providing more meaningful guidance to the water use efficiency and water transfers programs.

Neither of these functions and benefits is included in the discussion of "Why CALFED has included water transfers in the preferred program alternative" (Water Transfers Program Plan, p. 1-3). We recommend that the document be revised to include them.

NRDC does not suggest that water transfers should be evaluated solely with regard to increased economic benefits to the exclusion of other concerns (e.g. environmental or other third party impacts). However, excluding this fundamental principle from the Water Transfers Program has led to much of the confusion in the program.

V. STORAGE

Proposals for new water storage facilities, particularly surface storage facilities, have become the most controversial issue in CALFED. We strongly suggest that CALFED evaluate storage on the basis of a few clear, simple criteria, including:

- Incorporation of sound economics;
- Likelihood of providing environmental benefits;
- Development of clear and consistent technical analysis (e.g. operating criteria);
- Compatibility with adaptive management; and
- Compatibility with providing assurances regarding benefits.

We are attaching our previous letter to CALFED regarding the draft Integrated Storage Investigation program, which amplifies these recommendations. The document errs in several specific respects.

DWR Surface Storage Workplan: The draft PEIS/R incorrectly describes the current decision-making process regarding surface storage. For example, the document indicates that environmental documentation and permitting for storage facilities would not begin until after the ROD. However, the Department of Water Resources is planning to begin the preparation of an EIR for the construction of new surface storage in the Sacramento Valley before CALFED selects a Preferred Alternative (DWR Offstream Storage Investigation draft workplan, attached). This workplan, prepared by an agency deeply involved in CALFED, suggests that at least one CALFED agency has already concluded that additional surface storage is necessary. It is not credible to assert that the commencement of this level of analysis does not represent a conclusion regarding need on the part of DWR. The preparation of environmental documentation and permits represent initial commitments to new surface storage. In addition, given the cost of these activities, agencies should not commit to these activities prior to a determination that new surface storage is required.

Additional Costs: NRDC's review reveals that the document has not adequately incorporated several potential costs of storage projects. These include, for example, likely cost overruns such as the $650 million overrun associated with the Eastside Reservoir (see California Water Law and Policy Reporter, August 1999, p. 260) and the environmental cost of new surface storage projects.

Adaptive Management: The document fails to adequately analyze the extent to which different water management tools are compatible with an adaptive management approach to providing improved water supply reliability (see attached comments on the Economic Evaluation of Water Management Alternatives Screening Analysis and Scenario Development). In particular, large capital-intensive projects provide water supply in large increments and are inflexible with regarding to adapting to changing circumstances. Many water conservation and land transfer programs provide benefits in smaller increments and can be terminated or modified in mid course. Such projects lend themselves far better to adaptive management programs.

Time Value of Water vs. Increased Diversions: The draft PEIS/R fails to evaluate the "time value of water "for the ecosystem - a theory frequently cited by CALFED staff. The theory that water is more valuable at some times in the hydrological cycle than at others is what has always driven water storage projects. And the projects built on the basis of this theory have been the single largest factor in the degradation of Central Valley rivers, the Bay-Delta Estuary and the fish and wildlife that depend on them. Clearly, water is of greater economic value at some times than at others for the agricultural industry and, in some cases, for urban water users. However, for the ecosystem, the picture is far less clear.

The discussion of storage in the document indicates that new storage may be allocated to environmental water supplies and could provide beneficial impacts (for fish and wildlife)" (6.1-39). However, a close reading suggests serious potential impacts from the construction and operation of new storage facilities, not the least of which is from conflicts with the Ecosystem Restoration Program. For example, the document calls for the establishment of "high-flow events necessary to maintain dynamic channel processes, channel complexity, bed sediment quality, and natural riparian habitats." (ERPP V1, p. 434). The proposed ecosystem restoration program flow targets (A-22) all represent high spring flows for Central Valley rivers. In addition, floodplain restoration is a major element of the ERPP. Such restoration would allow more high flow events. In fact, the health of restored floodplain habitat would be dependent on adequate high flow events. Thus, the document indicates that high flow events are critical to ecosystem restoration.

Increased storage, however, could reduce some of the very high flow events that the ecosystem restoration program calls for. For example, the document indicates that the preferred alternative could lead to increases in Delta diversion by 250,000-380,000 acre feet per year, and that with additional storage, additional diversions could reach 490-900 TAF per year (180-670 TAF in dry and critical years) (3.8, 5.1-60). Delta outflows are similarly reduced (5.1-62). Total predicted water delivery increases across all alternatives range from .5 to 1.5 MAF (6.1-57). In addition, figure 5.2-59 indicates that new storage would have the effect of reducing flows at Rio Vista at all times except during the summer irrigation season. In particular, such operations with new surface storage reduce flows at Rio Vista at precisely the same time as the Ecosystem Restoration flows are designed to increase flows.

The draft PEIS/R does acknowledge some of the potential negative environmental impacts of the construction and operation of new surface storage facilities (6.1-4). However, potential hydrodynamic impacts are dismissed by describing "minor changes to riverine flows." (3-9). The cumulative effects of the development and operation of dozens of reservoirs have been disastrous. These cumulative impacts are not adequately addressed.

The "time value of water" for the ecosystem should be evaluated in comparison with the additional impacts of further diversions and depletions from the system. The document should also be revised to evaluate alternatives that would cap exports at current levels and, over time, decrease net exports from the ecosystem.

The theory that high flow events can simply and safely be diverted to storage was dispelled this spring by the Delta smelt conflicts at the state and federal pumps. Far from suggesting that ecosystem protections should be relaxed or violated (which happened this year), this event indicates that there are real limits to the total amount of

water that can be diverted from the system without causing environmental damage, even during wet periods.

Additional Impacts: The draft PEIS/R lacks an adequate discussion of potential storage impacts such as the effectiveness of fish screens, alternative operations plans (triggers and timing) to reduce impacts to fish species, water quality, changes in X2, Bay water quality, impacts to Suisun Marsh and temperature impacts.

Floodplain Restoration: The document indicates that new surface storage reservoirs "may provide flood control benefits downstream if space is dedicated for flood control" (7.8-28). However, there is not an adequate discussion of the yield benefits that could result from floodplain restoration, as a result of the reduction of flood control reservations in upstream reservoirs.

Assurances: The draft PEIS/R does not adequately indicate how CALFED intends to assure that promised ecosystem benefits will be achieved. This assurances concern is not a theoretical one. The Bureau of Reclamation facilities in the Trinity River basin, for example, were authorized for the purpose of enhancing the fisheries in the river. The actual operation of those facilities, however, has been driven almost exclusively by the needs of Central Valley water users, to the detriment of the environment. Therefore, even if CALFED can find theoretical benefits for the environment from additional storage, it must provide adequate assurances to guarantee that those benefits would actually be provided.

Evaporative Losses: The draft PEIS/R does not discuss the extent to which evaporative losses would reduce yields from surface storage facilities compared with groundwater storage. Data from the Department of Water Resources suggest that evaporation from storage on the west side of the Central Valley (where many potential new surface storage facilities would be located) is among the highest in the state.

Allocation of Storage Benefits: NRDC notes what appear to be conflicting assumptions regarding the allocation of water from new storage facilities. The document states in one location that water from new storage would "be used to reduce groundwater overdraft, to increase in-stream flows, and to support production of lands fallowed by supply restrictions" (7.2-22). However elsewhere, the document includes the results of an analysis that assumed that "new San Joaquin River surface storage facilities were dedicated to providing water for Ecosystem Restoration Program flow targets (5.1-41). At another point, it indicates that 2.0 MAF of south-of-Delta off-aqueduct surface storage is assumed to benefit CVP/SWP south-of-Delta service areas (A-21). Some of these analyses appear to assume the development of up to 6.0 MAF of new storage. The document must be revised to present a consistent allocation scheme for new water supplies from all sources, including individual facilities and a range of total new storage.

Make Up Pumping: The document mentions make up pumping operations (3-13), but they are not adequately explained or justified. Recent positions before a federal court judge have clearly indicated that the state and federal agencies are in significant disagreement regarding the requirements of the ESA, the Clean Water Act and the CVPIA with regard to make-up pumping.

NRDC recommends that CALFED focus its efforts regarding storage during Stage 1 on less expensive, less damaging and less controversial water management tools. This course of action, which was selected to resolve uncertainties and controversy regarding the Peripheral Canal, would be a wise one to select for surface storage.

VI. STATE PUMPING CAPACITY

The draft PEIS/R assumes that the regulatory limits on the State Water Project's Delta pumps will be relaxed (6.1-50). This action is not adequately analyzed and a full range of alternatives have not been considered. The document does not indicate what beneficial interests would be served by this increase in pumping capacity.

VII. ECONOMICS

The draft PEIS/R economics analysis regarding the costs and benefits of proposed water management actions is not adequate (see also discussion of water use efficiency, above). The document includes a brief analysis of the least-cost water supply options for urban water users (Tables 7.5-18 and 19). However, it does not contain adequate information to determine what water management approaches would minimize costs. In addition, there is no least-cost analysis for agriculture.

The document indicates that the value of new water supplies for agriculture ranges from $30 to $40 per acre foot in the Sacramento Valley(7.2-19) to $60 to $100 per acre foot in the San Joaquin River Region (7.2-22), but it does not present the cost of various water supply alternatives. However, this value to agriculture is well below the cost of many new groundwater supply projects and all proposed new surface supply facilities (EEWMA draft Screening Analysis and Scenario Development, chart 3-5). Absent this comparison, NRDC fails to see how CALFED can find adequate economic justification for new surface storage to serve agricultural water users.

CALFED is currently preparing two significant economic analyses as a part of the Economic Evaluation of Water Management Alternatives effort. One of these efforts has released some preliminary results. We have several concerns regarding this document. Although these results are not included in the draft PEIS/R, we have attached an analysis of that document to assist CALFED in preparing a more adequate economic analysis. It is worth noting that even these flawed preliminary results indicate that CALFED has not identified any justification for surface storage to serve agriculture and that the only surface storage facilities that might be cost-effective for

urban communities are those generated using "high yield" estimates. High yield estimates are developed using the most aggressive and environmentally-damaging operations scenarios. Given the potential for such operations to harm environmental resources through increased diversions, particularly listed and candidate species, the draft PIES/R should indicate that new surface storage facilities may conflict with the CALFED solution principles (1-5).

Several of our attached comments regarding the EEWMA preliminary results are applicable to the economic analysis in the draft PEIS/R. For example, the discussion of the EEWMA includes a discussion of the concept of demand "hardening." This concept is also included in the urban water supply economics section (7.5-49). Thus, the draft PEIS/R does not contain an adequate analysis of demand elasticity.

VIII. FINANCING PLAN

Environmental Impacts of Financing: The environmental impacts of financing options are not adequately addressed. For example, the Financing Plan fails to indicate that some mechanisms (e.g. general obligation bonds and state and federal appropriations) would create new subsidies and encourage inefficient water use (Implementation Plan, 142-4). Thus, some financing mechanisms could encourage environmentally-damaging projects that would not otherwise be viable, increasing total water diversions from the Bay-Delta system. The use of these financing mechanisms for water supply purposes would violate CALFED's beneficiary pays principle. They also represent significant state and federal actions for the purposes of CEQA and NEPA and must be fully evaluated in this document.

Timing of Financing Decisions: The draft PEIS/R inappropriately delays the allocation of costs and credits until "the program moves into the implementation phase" (A-29) and that "specific beneficiaries and willingness of beneficiaries to pay for new facilities will not be determined until later stages of the Program" (5.1-25). Such a delay in the preparation of a meaningful financing plan violates the requirements of CEQA and NEPA and undermines CALFED planning efforts.

Consistency with CALFED's Beneficiary Pays Principle: The financing plan also does not appear to reflect the CALFED "beneficiaries pay" principle. For example, the discussion of financing mechanisms states that the fact that general obligation bonds cannot be used for ongoing costs is a "disadvantage". It may be a limitation, but, given that the beneficiaries pay principle is intended to send economic signals to encourage efficient water use, we see such a limitation as an advantage. This section should be rewritten to indicate the extent to which the various financing mechanisms are compatible with CALFED's applicable principles.

Western Water Policy Review Advisory Commission: The document, particularly the financing plan, should be revised to include some of the recommendations of the

Western Water Policy Review Advisory Commission, published by the U. S. Department of Interior in June, 1998. This process represents another broad, stakeholder-driven consensus-based effort to find solutions to Western Water issues. Among other recommendations, the report encourages federal agencies to "seriously consider pricing their services closer to the full cost to the taxpayer of providing the service and, if appropriate, promote water rate structures that encourage efficient water use: (Water in the West, June 1998, p. xxii)

Repayment of CVP Costs: The draft financing plan also indicates that the "effective cost shares" for repayment of water project costs by agricultural water users have been 10% to 15% (Implementation Plan,103). However, a May 26, 1999 analysis prepared by the General Accounting Office for Congressman John Doolittle indicates that irrigation contractors have repaid only 5.6% of the CVP costs assigned to them and that municipal and industrial contractors have repaid only 1.6% of the CVP costs assigned to them. This new information should be incorporated into the document.

Willingness to Pay: As discussed above, the document states that storage facilities would benefit agricultural water users. These water users, however, have expressed a clear unwillingness to pay any additional costs for such facilities (see attached Agricultural Water Caucus position). Given the price of new surface storage and the value of new water to agriculture (discussed above), such unwillingness is understandable. The document should be modified to indicate that agricultural water users have stated that they are unwilling to pay for storage facilities and, therefore, consistent with CALFED principles, would not receive any water from storage facilities developed through the CALFED program.

The document should be revised to include a realistic financing package that addresses the issues above and that is consistent with CALFED's principles.

IX. DELTA CONVEYANCE

Hood Diversion: The Phase 2 Report released in December called for the evaluation of a screened diversion at Hood of up to 2,000 cfs. The June Revised Phase 2 Report, included in the draft PEIS/R, however, calls for the construction, not the evaluation, of a diversion at Hood of up to 4,000 cfs. The document fails to explain the reason for this change of position.

Channel Enlargements: The June Revised Phase 2 Report also appears to have fewer qualifications regarding the expansion of channels through the Delta than did the December Report. The language in the December document that such channel enlargements "may be implemented if necessary" (Revised Phase 2 Report, December 1998, 110) no longer applies to Delta levees (Revised Phase 2 Report, June 1999, 130). This change in position appears elsewhere in the document (2-18). Enlarged channels are a major characteristic of Alternative 2. The document fails to explain the reasons

behind this change in position and fails to distinguish between the impacts of the Preferred Alternative and Alternative 2.

The document indicates that the conveyance impacts of Alternative 2 are similar to the Preferred Alternative (6.1-54). However, fisheries agencies have consistently indicated that Alternative 2 is the most environmentally damaging alternative under consideration. The document does not adequately discuss how these impacts would be avoided or mitigated to make the conveyance impacts of the Preferred Alternative acceptable. For example, the document does not address the feasibility of developing ladders or other facilities to allow upstream passage of migratory fish, particularly listed and candidate species (6.1-52). The document also does not discuss the extent to which migratory fish that cue to water from their natal streams would be confused by additional cross-Delta flows.

Cumulative Impacts: The document also does not indicate the potential cumulative impacts from the increased risk of an isolated facility or cross-Delta facility, should the Hood diversion facility be constructed. The Hood facility would include fish screens, intake facilities, pumps and a channel to the Mokulomne River. This channel would very closely follow the alignment of the Peripheral Canal, as proposed in 1982. The proposed 4,000 Hood facility is similar to the 5,000 low-end range for the isolated facility in alternative 3. The document suggests that Alternative 3 could most dramatically increase net diversions from the Delta, by up to an additional 499 TAF compared to the Preferred Alternative (3-8). These physical facilities, along with the regulatory approvals required for these facilities, would significantly reduce obstacles to the construction and operation of an isolated or cross-Delta facility.

Assurances: The draft PEIS/R fails to include an adequate discussion of assurances to prevent a screened diversion at Hood from being expanded (Alternative 2) or extended (Alternative 3).

The discussion of the Hood diversion and expanded Delta channel capacity should be rewritten to reflect the language in the December 1998 Phase 2 report

X. WATER QUALITY

Inappropriate Focus on Conveyance: The document places greater emphasis on conveyance than on source control, blending, alternate water supplies, projected treatment infrastructure upgrading, new treatment technologies, or other potential tools as strategies to provide adequate drinking water quality. For example, the document proposes to spend $913 million on storage in Stage 1 (Implementation Plan, p. 159). The water treatment program, on the other hand, is extraordinarily modest – "CALFED will work with water utilities to ensure that EPA's and AWWARF's efforts continue to be useful to water suppliers dependent on Delta supplies" (Revised Phase 2 Report, p. 45). In addition, the document relies heavily on an extra-regulatory

source water quality goals as triggers for a Delta facility. NRDC strongly supports the achievement of high drinking water quality for Californians. Such a narrow focus on source water, however, without consideration of other strategies is inadequate to address this important programmatic goal. In particular, given the broad range of possible drinking water quality strategies, CALFED's use of a Delta drinking water goal as a trigger for a Delta facility is inappropriate.

The document should be revised to include a balanced program, including a balanced level of effort and funding, for a full range of potential drinking water quality strategies. In particular, these should include ambitious efforts to implement targeted evaluations that are complementary to the ongoing research and development programs discussed in the document. NRDC and other members of EWC intend to submit further recommendations regarding the CALFED water quality program.

Mercury and Dredged Material Reuse: The discussion regarding mercury and actions regarding mercury evaluation and abatement should be revised to include the potential for dredged material reuse for habitat and levee reuse purposes to reduce mercury loadings to the Estuary (Revised Phase 2 Report, 115 and 5.3-14).

Salinity and Bromide: The document indicates that the Preferred Alternative would decrease salinity (and bromide) at the Delta pumps (5.3-32) and increase bromide at Old and Middle Rivers (5.3-33). The reasons for these different results at such proximate locations is not adequately explained.

Reducing Delta Diversions: Because the document fails to evaluate alternatives that would cap or reduce system-wide and/or Delta diversions, it has failed to evaluate an option that could improve water quality at the pumps by reducing diversion-caused salinity in the Delta.

XI. ECOSYSTEM IMPACTS AND RESTORATION

NRDC commends CALFED for working towards an ambitious, science-based, adaptive ecosystem restoration program. We support the comments of our colleagues, particularly The Bay Institute, regarding additional improvements needed in this area.

San Joaquin River: As we indicated in our previous comments, NRDC believes that CALFED should expand its ecosystem restoration vision to include full restoration of the San Joaquin River.

Sources for Environmental Water: As discussed above, the document does not adequately evaluate the potential for a wide range of strategies to provide needed ecosystem flow improvements. For example, the document does include estimates for ecosystem flow purchases with and without storage (Tables 5.1-3 and 4). However, the document does not indicate how other tools, such as conservation and reclamation,

could provide ecosystem flows. To the extent that public funds from the Bay-Delta Act, Prop. 204 and the pending water bond are used for these purposes, there is an opportunity for these strategies to provide water for ecosystem restoration purposes. In particular, the pending water bond would direct CALFED to determine how the water supplies supported by that bond should be shared among consumptive and ecosystem uses. Such sources could provide early contributions to an Environmental Water Account. Finally, the document should discuss the institutional obstacles created by the "Monterey Accord" to using a full range of water management tools throughout the state to provide water for the EWA.

Development of Additional Agricultural Lands: The document does not contain an adequate discussion of potential environmental impacts if the program leads to the irrigation of currently unirrigated agricultural lands (7.14-9).

Percent of Runoff Diverted: The document indicates that less than half of the natural surface runoff state-wide is depleted for consumptive water use (5.2-5) However, this estimate includes the large rivers on the North Coast that are isolated (except for the Trinity River) from major agricultural and urban centers. The document should be revised to include estimates of depletions of total Central Valley runoff.

Yield Increases from Floodplain Restoration: The document fails to indicate that restoration of floodplains could reduce flood control reservation in existing surface reservoirs, increasing yield from existing facilities. The document should evaluate this potential strategy. This could be another source of water for the EWA, particularly if floodplain restoration is paid for by public funds.

Habitat Restoration and Beneficial Reuse of Dredged Material: The document accurately indicates that the modification of the Delta over the past 150 years has had a major impact on ecosystem health in this portion of the Estuary. The loss of emergent, submerged and riparian habitat, the reduction of land-water interface, increased water temperatures, decreased biological productivity, the modification of the Delta's hydraulics and increased residence time have all contributed to the decline of the Estuary, particularly for resident and anadromous fish species (ERPP V2, P.50). The document calls for the restoration of habitat in the Western and Central Delta. However, we believe that the document fails to evaluate adequately a major opportunity for restoration – the beneficial reuse of Bay dredged materials. This issue has been addressed in detail in a document prepared by Save The Bay entitled Opportunities for Delta Reuse of Clean Material Dredged from San Francisco Bay (August 1999). This report reveals the substantial opportunity that could be presented by Delta reuse of clean material dredged from the Bay. NRDC supports the comments of Save The Bay with respect to this issue.

The draft PEIS/R does mention the potential benefits of the reuse of dredged materials (ERPP, V2, p. 89) and of linking Delta restoration with the LTMS strategy for the

beneficial reuse of dredged materials (ERPP V2. P.72). However, this passing mention does not lead to an adequate discussion of this potential strategy. The document fails to incorporate this opportunity in several key respects.

The document fails to discuss the salinity concerns raised by the potential reuse of Bay dredged material in the Delta. This issue is discussed in detail in the Save The Bay report. Clearly, salinity concerns are one of the most significant obstacles to the reuse of dredged material in the Delta. Save The Bay's report indicates a number of potential salinity control strategies that should be addressed in this document.

Beneficiaries of levee restoration and habitat restoration could include Bay dredgers, if dredged material is reused in projects in this area. The financing options for ecosystem restoration (Financing Plan, p. 135) should indicate that cost-sharing with dredging agencies could provide a significant new source of funding for restoration. For example, the LTMS ROD calls for 40 percent of Bay dredged material to be disposed at the deep ocean disposal site. Such disposal costs $6-8 or more per cubic yard. In the coming 50 years, up to 100 million cubic yards of material could be disposed in the ocean. If the CALFED ecosystem or levee programs could beneficially reuse this material an LTMS/CALFED partnership could result in a significant source of funds for levee maintenance and habitat restoration that could lower the cost of disposal to Bay Area dredgers.

Given the ecological importance of restoration in the Central and Western Delta, the habitat restoration goals in this portion of the Delta are insufficient. We believe that this inadequate restoration goal is the result of the CALFED program's failure to investigate adequately the opportunities to address the subsidence problems in the Western and Central Delta. The document indicates that for Delta smelt and many other species, the Central and Western Delta provides critical habitat. However, although the document calls for 30,000 to 45,000 acres of tidal wetland habitat restoration in the entire Delta (ERPP V2, P. 92), it calls for only 2,500 acres of tidal perennial aquatic habitat in the Central and Western Delta (ERPP V2, p. 89). The lack of a comprehensive subsidence reversal or beneficial reuse strategy is most clearly indicated in the discussion of non-tidal freshwater wetland habitat. This section calls for 10,000 acres of restoration in the Central and Western Delta and indicates that "Up to 75% of this acreage may be restored to tidal action after the appropriate land elevations are achieved through island accretion." (ERPP V2, p. 93). Thus, the document appears to suggest that, in the absence of subsidence, the wetland goal for the Central and Western Delta would be at least 7,500 acres higher. However, the document fails to address subsidence reversal strategies, among which beneficial reuse is among the most prominent. In fact, rather than investigate the potential for subsidence reversal to allow tidal marsh restoration, the document calls for the CALFED program to focus on upgrading levees on the most subsided Delta islands (ERPP V2, p.72).

The document, particularly the ecosystem restoration and levee programs, should be revised to reflect the recommendations in the Save The Bay report.

XII. ENVIRONMENTAL WATER ACCOUNT

The document prominently features an Environmental Water Account as a strategy to provide needed flows for ecosystem restoration. However, the document does not contain adequate information to evaluate the benefits, or the environmental impacts of an EWA. Given that new surface storage has been modeled in the document as a source of water for the environment, depending on how it is crafted, the EWA could have significant adverse environmental impacts.

Baseline: In order to evaluate the potential benefits of an EWA in comparison with existing conditions or the no action alternative, the document must include a clear statement of the baseline conditions above which the EWA will provide additional environmental protection and restoration benefits. Many water users have suggested baseline assumptions that would turn the EWA into a program to develop water for consumptive uses with no ecosystem benefits. In such cases, the net environmental effects of an EWA could be negative.

In particular, the document should explain the position of state and federal agencies regarding the requirements of the CVPIA and the Bay-Delta Accord, particularly regarding make up issues. The State and Federal governments have on recent occasions disagreed regarding make up (and accounting). This baseline issue must be resolved to determine the potential value of an EWA.

Priorities: The draft PEIS/R must indicate the amount of EWA water that would be dedicated to regulatory compliance (as an alternative to prescriptive standards) and the amount that would be dedicated to ecosystem recovery above regulatory requirements (5.1-20). Unless some of the assets of the EWA are reserved for recovery, it is unlikely that the EWA would provide benefits above regulatory requirements.

Impacts of Additional Diversions: To the extent that CALFED proposes that the EWA derives water from additional depletions from the ecosystem, through surface or groundwater storage, relaxation of standards or increased pumping capacity, the document must fully address the cumulative effects of additional depletions (also see storage section, above). As discussed above, the document should consider a full range of possible sources of water for the EWA.

Management and Assurances: The management of an EWA is a key governance and assurances issue that will have a significant impact on the potential benefits of an EWA. The document must be revised to present a clear EWA management structure.

XIII. ENVIRONMENTAL JUSTICE

The document inadequately addresses potential impacts and benefits to minority and low-income populations. For example, the document does not discuss the impacts of CALFED financing on employment. Given that CALFED is considering subsidized water development to serve agriculture, would these increased subsidies encourage inefficient irrigation practices and low-value, low-labor intensive crops? If so, what effect would these practices have on employment? The document suggests that storage could lead to "shifts to higher value crops" (7.14-9). Although such a change could provide employment benefits, these benefits are more dependent on financing than the water management strategy selected. In fact, if CALFED emphasizes expensive surface storage projects at the expense of less expensive options, the impacts on agriculture and farm labor employment could be negative. The document does not discuss the fact that agricultural water use efficiency programs could also lead to shifts to higher value crops and increased employment. Thus, the brief discussion regarding rural employment impacts inaccurately suggests greater benefits to minority and low-income communities from increases in storage in comparison with other strategies.

The document appears to dismiss the minority and low-income employment benefits of water conservation programs because they "would require skilled labor" (7.14-8). The document fails to discuss the extensive experience in this area in Southern California. Over the past decade, Southern California has made a major investment in water conservation, with significant economic benefits for low income and minority communities. Such benefits could be generated state-wide through aggressive implementation of water use efficiency programs.

We commend CALFED for progress made to date. Unfortunately, much of the progress that NRDC has witnessed through our involvement in the CALFED process is not reflected in the draft PEIS/R. We recommend that the document be revised to address the concerns we have raised and to reflect the progress made throughout the CALFED program. We look forward to working with you to develop and implement a balanced CALFED program.

Sincerely,

Barry Nelson
Senior Policy Analyst

Ann Notthoff
California Advocacy Director

Attachments:
Blueprint for an Environmentally and Economically Sustainable CALFED Water Supply Reliability Program
NERA analysis of EEWMA
July 1998 NRDC comments

Comment letter on the Integrated Storage Investigation
Excerpt from the Agricultural Water Caucus position on CALFED
DWR draft workplan for Sacramento Valley Offstream Storage
June 1998 EWC comments

cc:
Environmental Water Caucus
CALFED policy group
Senator Dianne Feinstein
Senator Barbara Boxer
Congressman George Miller
Congresswoman Ellen Tauscher
Senate President pro tem John Burton
Senator Byron Sher